IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: 　　Mehmet O. Sunay	Conf. No. 7323
Serial No.: 09/660,093	Examiner: B. Phunkulh
Filed: September 12, 2000	Group Art Unit: 2477
For: CODE SPACE SHARING AMONG 　　MULTIPLE MODES OF OPERATION	Att'y Docket: 2100.002900
	Customer No. 92585

APPEAL BRIEF

Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant hereby submits this Appeal Brief to the Board of Patent Appeals and Interferences in response to the final Office Action dated May 9, 2011. The fee for filing this Appeal Brief is $540.00 the Commissioner is authorized to withdraw funds from Williams, Morgan & Amerson's Deposit Account 50-0786/2100.002900.

I.   REAL PARTY IN INTEREST

The present application is owned by Lucent Technologies, Inc. The assignment of the present application to Lucent Technologies Inc. is recorded at Reel 011226, Frame 0775.

II.   RELATED APPEALS AND INTERFERENCES

Applicant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.

III.   STATUS OF THE CLAIMS

Claims 1-16 were originally presented in this application. Claims 6-7 and 13-16 have been canceled. Claims 1-5 and 8-12 are pending in the present application and these claims are the subject of the present appeal. Claims 1-5 and 8-12 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Kim, et al (U.S. Patent No. 6,937,559) in view of Pfeil, et al (U.S. Patent No. 6,252,967).

IV.   STATUS OF AMENDMENTS

There were no amendments after the final rejections.

V.   SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 sets forth a method for partitioning code space in a communication system. The method includes:

- dividing a code space into at least two subspaces (10, 20). Codes in the first subspace (10) are assigned to one or more user for a voice communication session

until the voice communication session of the user(s) is complete. All of the codes in the second subspace (20) are assigned to each of a plurality of users for data communication on a time-shared basis so that each of the plurality of users can use all of the codes in the second subspace (20) for a selected time interval. See Patent Application, page 3, lines 2-6 and Figures 4-5.

Claim 8 sets forth a method for partitioning code space in a communication system. The method includes:

dividing a code space into at least two subspaces (10, 20). Codes in the first subspace (10) are assigned to one or more users for a voice communication session until the voice communication session of the user(s) is complete. All of the codes in the second subspace (20) are assigned to each of a plurality of users on a timeshare basis for data communication so that each of the plurality of users can use all of the codes in the second subspace (20) for a selected time interval. See Patent Application, page 3, lines 2-6 and Figure 4.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant respectfully requests that the Board review and overturn the rejections present in this case. The following issues are presented on appeal in this case:

(A)   Whether claims 1-5 and 8-12 would have been obvious over Kim in view of Pfeil.

VII. ARGUMENT

A. Legal Standards

A finding of obviousness under 35 U.S.C. § 103 requires a determination of the scope and content of the prior art, the level of ordinary skill in the art, the differences between the claimed subject matter and the prior art, and whether the differences are such that the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. *Graham v. John Deere Co.*, 148 USPQ 459 (U.S. S.Ct. 1966).

To determine whether the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made, one should determine whether the prior art reference (or references when combined) teach or suggest all the claim limitations. Furthermore, it is necessary for the Examiner to identify the reason why a person of ordinary skill in the art would have combined the prior art references in the manner set forth in the claims. The required reason may be provided by some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Thus, the absence of a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings may be evidence that the claims are not obvious. Moreover, there should be a reasonable expectation of success on the part of a person of ordinary skill in the art. Teaching away by the prior art may constitute *prima facie* evidence that the claimed invention is not obvious.

B.   **Claims 1-5 and 8-12 would not have been obvious over Kim in view of Pfeil.**

Claims 1 and 8 set forth partitioning a code space in a communication system so that codes in a first subspace are assigned to users for voice communication sessions until the users' voice communication session is complete. All of the codes in a second subspace are assigned to each of a plurality of users for data communication on a time-shared basis so that each of the plurality of users can use all of the codes in the second subspace for a selected time interval. Applicants respectfully submit that the Examiner has erred in concluding that the combination of Kim and Pfeil describes or suggests that all of the codes in a second subspace are assigned to each of a plurality of users for data communication on a time-shared basis so that each of the plurality of users can use all of the codes in the second subspace for a selected time interval.

In the prior art of record, the only discussion of separating Walsh codes into different groups is found in Kim. Kim describes allocating a Walsh code to a primary (circuit data) user under the assumption that the user transmits data at a maximum data rate. The allocated Walsh code also defines a set or pool of Walsh codes that are unavailable when the circuit data user communicates at the maximum data rate. Walsh codes in the pool become available to other users when the user transmits data at a rate that is less than the maximum data rate. Kim describes allocating available Walsh codes from the pool to packet data users when the primary user is transmitting at less than the maximum data rate. See Kim, col. 6, l. 60 – col. 7, l. 43 and Figure 4. Applicants therefore respectfully submit that Kim describes two groups of codes: a first "group" of codes that includes only the Walsh code allocated to the primary user for data transmission at the maximum data rate and a second group of codes that includes the pool of codes that are unavailable when the primary user transmits at the maximum data rate.

Kim does not describe or suggest allocating all the codes in the second group to any user so that the user can use all of the codes in the second subspace for a selected time interval. The second group described by Kim includes the Walsh codes that are only available to packet data users when the primary user is not transmitting at the maximum data rate. In that case, packet data users can be allocated codes from the second group. However, Kim does not describe or suggest allowing any user to use all of the codes in the second subspace for a selected time interval. To the contrary, Kim describes allocating different available Walsh codes to different packet data users based on their priorities. Higher priority packet data users are allocated Walsh codes that guarantee better service and lower priority packet data users are allocated Walsh codes that have a higher probability of service delay. See Kim, col. 6, ll. 20-26. Applicants therefore respectfully submit that Kim is describing a technique for distributing available codes among different users so that multiple packet data users can concurrently use the different available codes while the primary user is transmitting at less than the maximum data rate.

Furthermore, as admitted by the Examiner on page 3 of the final Office Action, Kim does not describe or suggest allocating codes to each of a plurality of users on a timeshared basis for data communication. The Examiner therefore alleges that Pfeil describes this limitation. However, Applicants respectfully submit that Pfeil does not describe or suggest assigning all of the codes in a second subspace to each of a plurality of users for data communication on a time-shared basis so that each of the plurality of users can use all of the codes in the second subspace for a selected time interval. Pfeil describes a multicarrier CDMA in which each carrier may contain a number of remote units and each remote unit is assigned *one* of 64 Walsh codes for a period of time. See Pfeil, col. 4, ll. 55-61. Applicants therefore respectfully submit that Pfeil

describes assigning Walsh codes one-by-one to different remote units and is completely silent with regard to assigning all of the codes in a subspace of codes (or Walsh code pool) to a user.

Applicants therefore respectfully submit that the prior art of record does not describe or suggest all the limitations set forth in claims 1 and 8. Applicants further submit that persons of ordinary skill in the art would not have been motivated to combine and/or modify the subject matter described in Kim and Pfeil to arrive at the claimed subject matter. To the contrary, both of the cited references teach away from the claimed subject matter for at least the following reasons.

First, as discussed herein, Kim describes allocating different available Walsh codes to different packet data users based on their priorities. Applicants therefore respectfully submit that Kim is describing a technique for distributing available codes among different users so that multiple packet data users can concurrently use the different available codes while the primary user is transmitting at less than the maximum data rate. Applicants respectfully submit that teaching that available codes should be distributed among different users teaches away from any technique that allows users to use all of the codes in the second subspace for a selected time interval.

Second, as discussed herein, Pfeil describes a multicarrier CDMA in which each carrier may contain a number of remote units and each remote unit is assigned *one* of 64 Walsh codes for a period of time. Pfeil teaches that assigning each remote unit to a different Walsh code allows each carrier to support a number of remote units that is equal to the number of available Walsh codes, *e.g.*, the 64 Walsh codes described in Pfeil. Applicants therefore respectfully submit that Pfeil teaches away from allocating multiple Walsh codes to a single remote unit because this would reduce the number of supportable remote units. Pfeil therefore teaches away

from any technique that allows users to use <u>all of the codes in the second subspace for a selected time interval</u>.

For at least the aforementioned reasons, Applicants respectfully submit that the Examiner has erred by not making a *prima facie* case that the pending claims would have been obvious over the prior art of record. Applicants respectfully request that the Examiner's rejections of claims 1-5 and 8-12 under 35 U.S.C. § 103(a) be <u>REVERSED</u>.

VIII. CLAIMS APPENDIX

The claims that are the subject of the present appeal – claims 1-5 and 8-12– are set forth in the attached "Claims Appendix."

IX. EVIDENCE APPENDIX

There is no separate Evidence Appendix for this appeal.

X. RELATED PROCEEDINGS APPENDIX

There is no Related Proceedings Appendix for this appeal.

XI. CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner erred in not allowing all claims pending in the present application, claims 1-5 and 8-12, over the prior art of record. The undersigned may be contacted at (713) 934-4052 with respect to any questions, comments or suggestions relating to this appeal.

Respectfully submitted,

Date: _____   _____

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AGENT FOR APPLICANTS

CLAIMS APPENDIX

1.   (Previously Presented) A method for partitioning code space in a communication system, comprising the step of:

dividing a code space into at least two subspaces, where codes in the first subspace are assigned to at least one user for a voice communication session until the voice communication session of said at least one user is complete and where all of the codes in the second subspace are assigned to each of a plurality of users for data communication on a time-shared basis so that each of the plurality of users can use all of the codes in the second subspace for a selected time interval.

2.   (Original) The method of claim 1, wherein codes are dynamically assigned between the at least first and second subspaces.

3.   (Original) The method of claim 2, wherein a minimum number of codes are provided to the first subspace.

4.   (Original) The method of claim 2, wherein a minimum number of codes are provided to the second subspace.

5.   (Original) The method of claim 2, wherein a plurality of codes are unassigned to a subspace and are available for assignment to either subspace.

6-7.   (Canceled)

8.   (Previously Presented) A method for partitioning code space in a communication system, comprising the steps of:

dividing a code space into at least two subspaces, where codes in the first subspace are assigned to at least one user for a voice communication session until the voice communication session of said at least one user is complete and where all of the codes in the second subspace are assigned to each of a plurality of users on a timeshare basis for data communication so that each of the plurality of users can use all of the codes in the second subspace for a selected time interval.

9.   (Original) The method of claim 8, wherein codes are dynamically assigned between the at least first and second subspaces.

10.   (Original) The method of claim 9, wherein a minimum number of codes are provided to the first subspace.

11.   (Original) The method of claim nine, wherein a minimum number of codes are provided to the second subspace.

12.   (Original) The method of claim 9, wherein a plurality of codes are unassigned to a subspace and are available for assignment to either subspace.

13-16. (Canceled)